



PRESCRIBED FIRE

A FOREST MANAGEMENT TOOL

What is prescribed burning?

Prescribed, or controlled, burning is the skilled application of fire under planned weather and fuel conditions to achieve specific forest and land management objectives. Controlled burning is an ancient practice, notably used by Native Americans for crop management, insect and pest control, and hunting habitat improvement, among other purposes. The practice continues today under the direction of land managers who understand the appropriate weather conditions, fuel loads and atmospheric conditions for conducting such burns. These carefully applied fires are an important tool to reduce wildfires, enhance wildlife habitat, and keep the hundreds of million acres of forested land in the South healthy and productive.

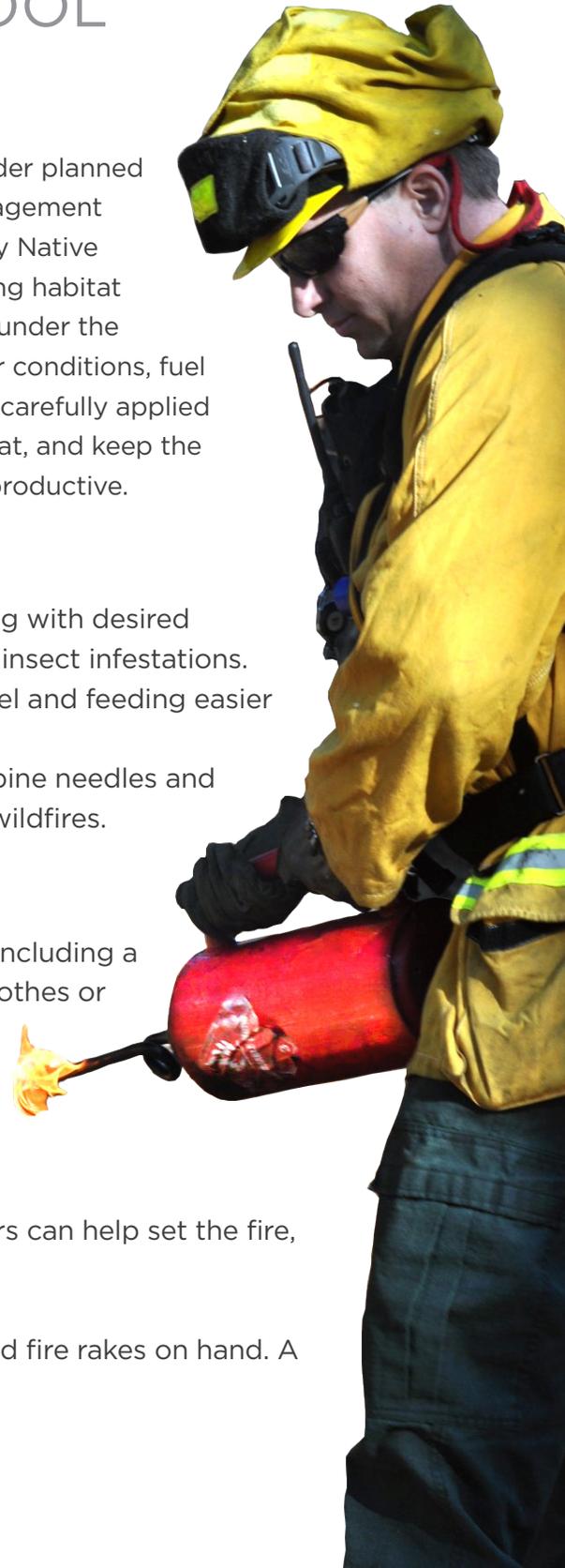
Benefits

- ▶ **Forest management:** removes unwanted brush that is competing with desired species. It can also help prevent or control certain diseases and insect infestations.
- ▶ **Wildlife management:** removes thick undergrowth, making travel and feeding easier for some species.
- ▶ **Wildfire hazard reduction:** reduces the amount of fuel (leaves, pine needles and twigs) on the forest floor, which can help prevent catastrophic wildfires.

Safety and equipment

- ▶ Always wear the proper personal protection equipment (PPE), including a hard hat, goggles/safety glasses, leather gloves, fire-resistant clothes or clothes made of natural materials, and leather boots.
- ▶ Use existing firebreaks and natural barriers, including roads, ponds and plowed fields. If needed, additional firebreaks should be created using hand tools, a bulldozer or by watering around the area the day of the burn.
- ▶ Work with a crew of at least three or four people. Crew members can help set the fire, control it and mop up.
- ▶ Use a drip torch to start the fire.
- ▶ During the burn have sprayers filled with water, shovels, axes and fire rakes on hand. A chainsaw is also a good tool to have available for cutting snags.

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Where to learn more

- ▶ Consortium of Appalachian Fire Managers & Scientists
<http://www.appalachianfire.org/appalachian-fire-references-guides/>
- ▶ Southern Blue Ridge Fire Learning Network: Considerations for Wildlife and Fire in the Southern Blue Ridge
<http://www.sbrfln.com/wildlife-fire-effects-handouts.html>
- ▶ Conservation Gateway
<https://www.conservationgateway.org/ConservationPractices/FireLandscapes/Pages/fire-landscapes.aspx>
- ▶ Southeast Prescribed Fire Initiative
<http://serppas.org/focus-areas/southeast-prescribed-fire-initiative/>
- ▶ Fire Research and Management Exchange System (FRAMES)
<https://www.frames.gov>
- ▶ North Carolina Forest Service
http://www.ncforestservice.gov/fire_control/fc_prescribedfire.htm
- ▶ South Carolina Forestry Commission
<https://www.state.sc.us/forest/mpb.htm>

The Nature Conservancy is sponsoring this TREC event in conjunction with multiple partner agencies. Please stay tuned for future announcements about this exciting training event. And for more information please visit <https://apfire.wixsite.com/sbretrec2018>.



Promoting Ecosystem Resiliency and Fire Adapted Communities Together



Left to right: The 2014 Klamath River TRES drew about 80 people, 17 of whom fulfilled basic NWCG firefighter requirements and received FFT2 certification on completing the TRES. The Loup River Valley TRES brought together fire practitioners from federal and Nebraska state agencies, NGOs, private contractors, municipal firefighters from several fire departments in Colorado, and practitioners from various agencies in Spain; this range of experiences in different fire management systems contributes to robust learning at TRES. A special weekend session on firing operations for VFDs was added to the 2015 Niobrara TRES to improve the local capacity to respond to wildland fires with safe and effective burnout techniques. *Photos: MKWC, Stéfano Arellano, José Luis Duce*

TRES Facts: 2008-2015

The Central Oregon TRES in May 2015 marked the 40th prescribed fire training exchange offered by the Fire Learning Network and its landscapes and partners. Those 40 events provided more than 1,350 training opportunities, while completing 76,821 acres of ecologically- and socially-appropriate prescribed fire.

Good planning, patience and a flexible, nimble approach enabled events to go forward in the face of potential obstacles ranging from blizzards, flooding and ice storms to state-wide burn bans. The resulting burning has helped manage woody encroachment into grasslands, supported forest restoration efforts, maintained culturally-important resources, and reduced fuels near communities.

Diversity in Action

TRES have ranged in size from 10 to 100 participants (median: 28). They have treated as few as 37 acres (the first Yurok TRES in California, burning for cultural resources) or as many as 6,200 acres (2011 Niobrara TRES, in the grasslands of northern Nebraska).

Participant skill levels range from local youth or college students on their first prescribed burns earning their basic firefighter qualifications to people getting the experience needed to qualify as burn bosses or other specialized positions. Backgrounds range from private landowners to wildland fire professionals, resource managers and researchers to municipal firefighters and air quality regulators.

Prescribed Fire Training Exchanges (TRES)

Begun in 2008 as a way of easing bottlenecks in training the prescribed fire workforce, these training events have since been adapted to meet a number of essential needs. They continue to serve seasoned wildland fire professionals in need of specific experience, as well as students and new firefighters who are beginning to shape their careers. Training exchanges also provide opportunities for agencies to work together and learn efficient ways to coordinate their resources and burn windows; give local fire departments training that helps them better respond to wildland fires; support tribes working to renew traditional burning practices; and help rural communities working to make themselves safer from wildfire.

Build Local Capacity for Safer Fire

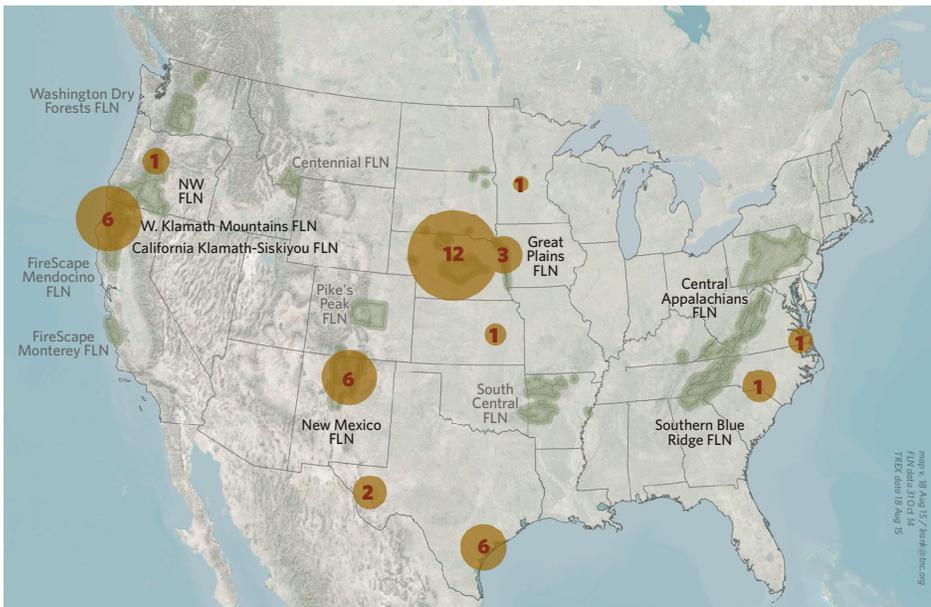
Training exchanges that focus on providing basic firefighter training—and integrating local fire and forestry contractors, local government agencies and non-profit conservation organizations—are providing basic job skills training, creating relationships and building trust among groups. The training and certification of individuals enlarges and improves the skill level of a new workforce, the relationships and trust built help fire management service providers find qualified crews, and TRES participants find federal and private jobs in the field. Training exchanges also demonstrate how groups can cooperate and collaborate, and by working together, increase an area's available fire management capacity.

Help Communities Become More Fire Adapted

There is probably no better way for a community to prepare for the inevitable approach of unwanted wildfire than to burn in and around the community themselves. There is no doubt that controlled burns can reduce the damaging effects of wildfires and make communities safer. In addition to completing burns near communities and helping local practitioners gain the experience to conduct further burns, TRES events spread this message by integrating visits from local media into their agendas.

Bring Together Diverse Crews to Foster Learning

Diversity matters. Having a wide variety of participants, mixed together and integrated into burn teams, allows great cross-learning among various fire professionals—federal, state and tribal crews, as well as contract fire crews and municipal firefighters. Bringing students, scientists, researchers, private landowners and regulators into the mix further enriches the learning. It has important and potent effects. Participants are able to spend time with a wide variety of people with different backgrounds and experiences, and everyone gains knowledge, insights and learning. Participants new to wildland and prescribed fire will say, “Wow, I had no idea how organized a prescribed fire is,” after participating in their



Since 2008 there have been 40 TRES held in numerous landscapes across the country. Numbers in the circles represent the total number of TRES offered in an area (it is worth noting that some areas host TRES offered by different partners, such as the NorCal, Klamath River and Yurok TRES in northern California). Circles are scaled to the total number of participants, which range from 14 (Minnesota) to 477 (Niobrara, Loup River and Central Loess Hills TRES in Nebraska).

Fire Learning Network (FLN) landscapes in Nebraska and Texas were instrumental in developing training exchanges beginning in 2008. Since then, FLNs in California, New Mexico, Virginia and, most recently, North Carolina and Oregon, have hosted TRES. These trainings have helped the FLNs strengthen partnerships, bring in new ideas, build local capacity for wildland fire management—and share their own knowledge—while completing important burn projects that promote ecosystem resiliency and community safety.



first briefing, burn and after action review. And wildland firefighters learn that lots of people—from municipal firefighters and air quality regulators to private citizens and students—bring strong ecological and practical experience, while other participants bring knowledge and experience in policy and management issues.

Give Students Hands-on Experience with Ecologically- and Culturally-Appropriate Fire

We hear it all the time, and numerous studies verify it: hands-on learning is the best kind of learning. Getting out and practicing pre-burn briefings, working with a fire ecologist to establish monitoring plots, walking the range with ranchers to understand grazing patterns and rotation schedules, or working as a trainee firing boss—these are the experiences that shape firefighters and other practitioners. Each spring in northern Nebraska, collaboratively planned and implemented prescribed burns further the educations of university students who will be the next generation of forest workers and managers. Through these training exchanges, scores of students have a newfound respect for prescribed burning, and an understanding that accomplishing prescribed burns

is a reasonable expectation—and a worthwhile goal. We are nurturing a generation that will feel confident that they can scale up the use of fire and restore cultural and natural fire regimes at the landscape level.

Support Interagency Cooperation

By forming ad hoc Type 3 Incident Management Teams to organize and host the trainings, individuals, organizations and agencies are learning that we can manage the potential liabilities of working together and on each other's lands. We do this by using tested avenues like MOUs, cooperative agreements, shared standards and collaborative planning. Federal, state and private fire teams are thus learning that they can depend on one another to support prescribed fire projects, just as they depend on each other during wildfires.

Integrate Traditional Burning

Tribes that are still practicing fire use for traditional purposes—such as for food security, regalia and basket making materials—are providing additional learning opportunities for participants. Learning from people who have a longer and often more complex view of the role of fire in an ecosystem is a great addition to the hands-on experience the training

exchanges offer. Participants may see that fire and people are inseparable, and that a full exclusion approach to fire may not only be impossible, it may be inappropriate.

Work through Barriers to Burning

By having a diverse body of participants, and by including ecological, cultural, regulatory and tactical components into TRES burning, training, field trips and classroom presentations, participants are learning that the barriers to implementing prescribed burns can be managed. Participants are learning that by collaborating with partners they can build a team of experts that have the capacity to successfully navigate the process of achieving good fire at scale.

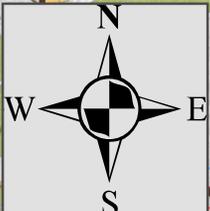
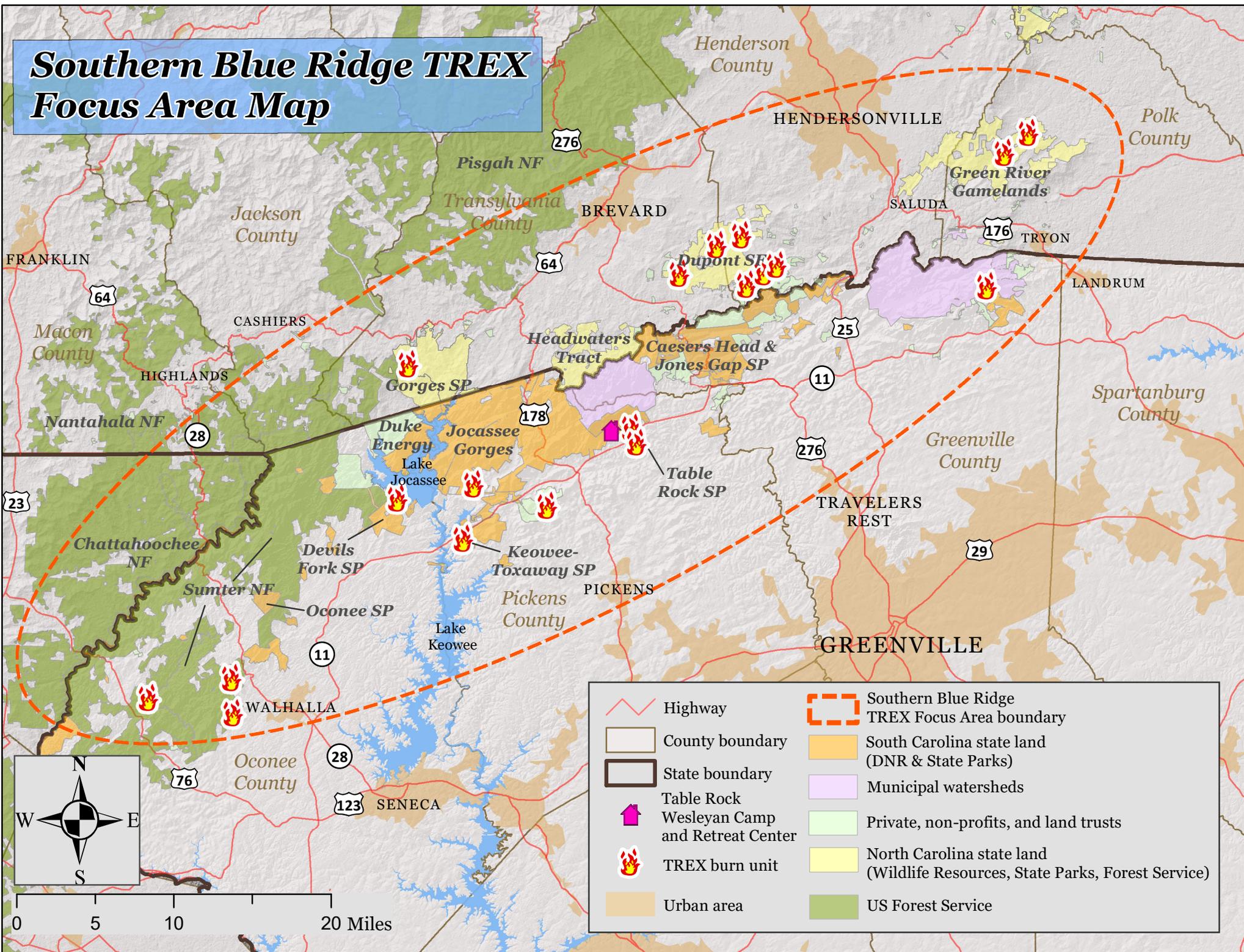
Learn More

TRES information is online at: <http://nature.ly/trainingexchanges>
For more, contact Jeremy Bailey (jeremy_bailey@tnc.org)

The Fire Learning Network (FLN) and Prescribed Fire Training Exchanges (TRES) are part of *Promoting Ecosystem Resilience and Fire Adapted Communities Together*, a cooperative agreement between The Nature Conservancy, USDA Forest Service and agencies of the Department of the Interior.

An equal opportunity provider

Southern Blue Ridge TREX Focus Area Map



	Highway		Southern Blue Ridge TREX Focus Area boundary
	County boundary		South Carolina state land (DNR & State Parks)
	State boundary		Municipal watersheds
	Table Rock Wesleyan Camp and Retreat Center		Private, non-profits, and land trusts
	TREX burn unit		North Carolina state land (Wildlife Resources, State Parks, Forest Service)
	Urban area		US Forest Service